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GOVERNMENT ALLOCATION OF PROPERTY RIGHTS: WHO GETS
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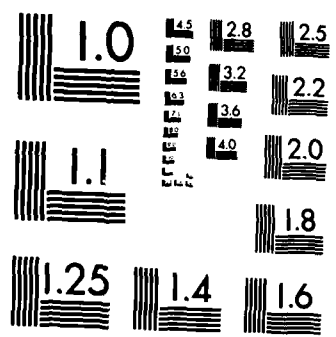
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GOVERNMENT ALLOCATION OF PROPERTY RIGHTS: WHO GETS WHAT?[1]

Regulatory policy often uses the device of allocating property rights either to give right of access or to limit access to a particular resource or activity. In the past, rulers or their representatives often conferred upon a subgroup of subjects hunting rights, rights to engage in certain businesses or professions, and rights to numerous other goods or activities. Modern, democratic governments confer similar rights.

The nature of these property rights and how the government assigns them has become a subject of paramount concern to policy analysts. Over the past two decades, the volume of regulatory legislation has expanded dramatically. During these same years, analysts have grown increasingly uneasy with the inefficiencies imposed upon the economy by both new and old programs. With the hope of improving such programs, they have devoted considerable time and energy to documenting these inefficiencies and proposing more efficient alternatives.

However, their very compelling arguments, for the most part, seem to have gone unheeded by the policymaking community. With few exceptions, regulators continue to control pollution through uniformly applicable, mandatory emission standards and technical requirements, not through more flexible and efficient market alternatives. Similarly, they continue to ration rather than auction access to limited resources such as wilderness camping sites and airport slots.

The persistence with which policymakers follow traditional allocation patterns suggests they are not simply poorly informed. Rather, they appear to be constrained by policy goals that are not yet clearly understood.

Perhaps, as the capture theorists argue, regulation is simply "a device for transferring income to well-organized groups...[and] regulators will use their power to transfer income from those with less political power to those with more." [2] But perhaps, instead, regulator policies reflect some mixture of public goals and political constraints,

and a better understanding of the constraints will enable the analyst to innovate more efficient policies, but ones that are also acceptable to policymakers.

The purpose of this research is to examine existing programs that confer property rights to learn what requirements shape them. We expect that if we can identify patterns in the design of such policies, these patterns will, in turn, suggest the political imperatives that constrain program design decisions.

As a first cut in exploring the constraints underlying the design of regulatory programs that confer property rights, I have chosen to examine only the essential features of a relatively large sample of programs. I chose this option on the premise that the larger sample demonstrates patterns more effectively than in-depth analyses of a few cases would. Our sample includes 12 cases selected primarily because they were well-known and information on them was readily available. The oldest case in the group is a regulatory program that has been in force since 1927. The newest cases are still in their formative stages. The cases have been chosen from the narrow range of programs where a property right has been conferred to achieve a regulatory goal, although individually the programs may have varying purposes and designs.

Three elements appear to determine the basic structure of a regulatory program that confers rights; who the recipient is, how much he receives, and what he receives.

Program designers have considerable latitude in designating recipients. A recipient might be chosen at random through, say, a lottery. He might be the highest bidder in an auction. He might be a best user--an applicant promising to perform the greatest social service in return for the benefit. He might be the historic producer or user--the person or firm who at some specified date in the past produced or consumed the resource. Or he might be the actual user--the person currently consuming or producing the resource during the period for which the right is conferred. Conferring benefits on actual users allows new market entrants to be eligible recipients, whereas conferring them on historic users restricts eligibility to those engaged in the activity during the identified base period.

When allocating rights, some characteristic must determine the amount of the allocation. How much should each recipient get? Again, the regulator's options are many. Recipients might receive whatever they are willing to buy. On the other hand, rights might be conferred on the basis of a fixed period of historic use, established over some specified base period, or they might be conferred on the basis of a fluctuating pattern of actual use. They might also be conferred, for instance, on the basis of historic or actual capital stock or number of workers employed.

Beyond identifying the recipient and the basis of making the allocation, a program must define the completeness of the property right being conferred. The question "What does the beneficiary receive?" asks what is the nature of the property right being conferred. A holder's property right may be viewed as a bundle of legally permitted uses of the object of the right. A property right may be complete, entitling the holder to use it for any legal purpose, sell it for any price he can get, hold it in perpetuity, and so forth. Or a right may be partial or limited, entitling the holder to only specified uses or use over a limited period of time.[3] The completeness of the property right generally determines its value to the owner.

Therefore, in this analysis, I ask two questions regarding the nature of a conferred property right. First, what bundle of rights--what uses of the property--does a recipient get? Can he sell it separately from his other assets? If not, can it be transferred with the sale of real property? Can he simply hold it or must he use it some way? Answers to these and similar questions help define what the government may be willing to allocate. Second, what is the duration of the recipient's ownership of the right? Once conferred, are the rights held in perpetuity? Or are they owned for a long or a short period, after which they will be redistributed? The answer to this question further defines the value of the right and what the government may be willing to allocate.

Regardless of a program's original purpose, similar design characteristics might be expected to beget similar implementation characteristics and problems. Therefore, I also hoped to identify patterns linking the two.

DESIGN, IMPLEMENTATION, AND EVOLUTIONARY THEMES

All programs in which the government allocates rights to particular groups seem to fall into one of three categories. Programs adopted when the government lays claim to unpossessed property, the property most often being land, and later passes it to the private sector for development fall into the first category. Programs adopted when either the user group or the public call upon the government to regulate the excessive use of a resource fall into the second category. And programs adopted to protect a particular group from growing market pressures fall into the third category. The list below identifies our study sample and breaks them down by type. Those falling into the third category are further broken down by recipient of the protection.[4] This typology proves very useful in understanding program design choices.

I. Programs to Develop Public Resources

- Allocation of offshore leases by the Department of Interior
- Allocation of newly available (mostly television) broadcast frequencies by the Federal Communications Commission[5]

II. Programs to Control Externalities

- Allocation of broadcast frequencies (radio) already in use by the Federal Communications Commission
- Allocation of groundwater rights in California by local districts
- Allocation of development rights by the California Coastal Commission
- Allocation of air pollution rights by the California Air Resources Board and local districts

III. Programs to Moderate Market Shifts--Producer Protection

- Allocation of truck operating authorities by the Interstate Commerce Commission

- Allocation of acreage allotments by the Department of Agriculture

IV. Programs to Moderate Market Shifts--Consumer Protection

- The oil price control program administered by the Federal Energy Administration and the Department of Energy
- The natural gas producer price control program administered by the Federal Power Commission

V. Programs to Moderate Market Shifts--Intra-industry Protection

- Allocation of oil quota program entitlements by the Department of Interior
- Allocation of oil price control program entitlements by the Federal Energy Administration and the Department of Energy

Each type of case reflects a response to a different situation or policy context. The context then determines who receives the rights and often what share he receives. Who receives the rights, in turn, often dictates the nature of the right and program implementation characteristics. Even when the choice of who receives the rights does not impose specific secondary design and implementation choices, political requirements sometimes seem to dictate certain choices, depending on the type of program. Table 1 summarizes the chief characteristics of the cases we examined.

PROGRAMS THAT DISTRIBUTE RIGHTS TO DEVELOP PUBLIC RESOURCES

When the government decides it is time to exploit some resource located on public land, it generally starts with a clean slate. The government has been the recognized owner of the land. No member of the private sector has a history of investment or use. There are no historic users. In the absence of a recognized historic claim to the resource, the government must decide upon some other characteristic to determine who receives exploitation rights.

Table 1

PROGRAM DESIGN CHARACTERISTICS

Program	Recipient	Basis for Allocation	Transferability of Right	Duration of Right
<i>PROGRAMS TO DEVELOP PUBLIC RESOURCES</i>				
U.S. off-shore leases	Highest bidder	Bid	Salable	Long term
T.V. broadcast frequencies	Best user	Social benefit	Transferable with sale of station ^a	Long term
<i>PROGRAMS TO CONTROL EXTERNALITIES</i>				
Radio broadcast frequencies	Historic user ^a	Historic use	Transferable with sale of station ^a	Perpetuity ^{a,b}
Groundwater pumping rights	Historic user	Historic use	Salable and transferable	Perpetuity
Development rights	Historic user	Historic holding	Salable	Perpetuity
Air pollution rights	Historic user	Historic use	Salable	Long term?
<i>PROGRAMS TO MODERATE MARKET SHIFTS</i>				
Truck operating authorities	Historic producer	Historic production	Salable	Perpetuity
Acreage allotments	Historic producer	Historic production	Transferable with real property	Perpetuity
Oil price control	Actual, historic, and best users	Historic and actual use, need	Not transferable	Not applicable
Natural gas producer price control	Actual, historic, and best users	Historic and actual use, need	Not transferable	Not applicable
Quota oil entitlements	Actual user	Actual use	Salable ^a	Short term
Price-controlled oil entitlements	Actual user	Actual use	Salable	Short term

^aThese entries reflect de facto results, although the law provides for best-user and best use allocation and non-transferability. This difference is discussed more fully in the text.

^bPerpetuity should be read "for all the life of the program." As the truck operating authority case demonstrates, Congress can and will terminate programs without compensation to right-holders.

The government's alternatives are several. It could auction or sell the rights for cash either to developers or to investors who would in turn sell them to developers. It could give them to developers or investors according to some equitable procedure like a lottery. Or, rather than auctioning rights for cash, it could give them to the developers or investors who agree to perform in a way that furthers to the greatest degree some stated government policy objectives. These recipients would qualify on the basis of being best users. The allocation of rights to exploit gas and oil reserves on offshore lands claimed by the U.S. government is an example of the auction method of distribution. The allocation of television broadcast licenses to licensees proposing the most extensive community service programming is an example of distribution to a best user. And though our sample included no cases where rights are allocated by lottery, the U.S. government now allocates a substantial fraction of its onshore oil and gas leases through a lottery open to any U.S. citizen. Lottery winners then sell their leases to developers. In short, governments have many options for allocating exploitation rights, and they seem to use them all.

Although the three allocation alternatives differ considerably along many dimensions, they have one thing very much in common. Governments seem universally anxious that a price be extracted from the developers. Auctions and lotteries both insure the market will extract a reasonable price from the developer, although in one instance the developer pays the government and in the other he pays the winner of the lottery. When rights are allocated on a discretionary basis to best users, the price extracted may be "high" or "low" depending on the administration of the program. (And often there is considerable argument over the measures used to establish best user status.) But a price is extracted.

While governments extract rents from developers, there appears to be no consensus on exactly who should benefit from the extracted rents. When leases are auctioned, the revenues go into the general fund and the taxpayer benefits. When the Federal Communications Commission assigns previously unused broadcast frequencies, it uses allocation criteria it

expects will result in broad-based benefits to a variety of audiences and to the citizenry as a whole. In the case of lotteries, only eligibility is broad-based. A small group of lucky winners lay claim to the rents. These examples suggest that policymakers must be concerned with an "equitable" distribution of the returns, but they also suggest that "equitable" includes both actual broad-based distribution of benefits and broad-based access to a "fair" process of distribution.

The term of the property right conferred is virtually the same in all cases of this type. Uniformly, governments seem to allocate medium-term leases with a clear right to renew. The typical first term of a U.S. offshore lease is five years, barely long enough to complete the exploration process. The shortage of time prevents the purchaser from holding the lease purely for investment purposes. Once developed, the developer has long-term lease rights to the land, but in no case does the government give up title to the land. Similarly, television licenses are typically valid for three years, but then only rarely are they not renewed.

Transferability of the right, not surprisingly, depends upon the method used to allocate it. If the developer purchases the right in an auction or it is awarded by lottery, it is salable. Federal Communications Commission regulations, on the other hand, prohibit the independent sale or transfer of a licensee's license. Discretionary allocation policies must incorporate rules preventing transfer, if the government is to assure itself that the holder of the right will conform to the best use standards. Also, when rights are awarded to best users, it would be politically embarrassing to have them resold at a substantial profit, thereby proving the government had not extracted a reasonable "price."

Although licensees may not be allowed to sell or transfer their licenses, stopping them proves very difficult. In practice, licensees routinely capitalize the value of the broadcast license into the price of the station when they sell it. And the Commission virtually always validates the transfer. To prevent speculation in licenses, the Commission has adopted a requirement that licenses be held for at least three years before transfer.

The three allocation alternatives impose substantially different administrative costs. When leases are auctioned, the government must identify the tracts, set forth the standard conditions of the lease, and organize and conduct the auction. The process requires no further supervision until the lease comes up for renewal, and the terms for renewal are reasonably standard. In the case of allocation by lottery, the government's job remains identical, except it must run a lottery instead of an auction. But at this point the lottery system imposes the additional costs on the economy of transferring the leases from winners to developers.[6] These costs are borne by the winner or developer, not the government. And finally, discretionary allocation requires substantially more administrative oversight. Government agencies must develop an allocation program. They must review and negotiate development or use plans. And they must constantly monitor actual development or use. Discretionary allocation requires "hands-on" administration.

In summary, when the government allocates rights as a vehicle for getting development or use of publicly owned, scarce resources, it does so in a unique regulatory context. There are no historic users or owners. Our cases suggest that with no historic users, governments show great flexibility in the type of allocative criteria they adopt. Their chief concerns appear to be guaranteeing that appropriate rents are extracted from users. In so doing, they preserve existing economic relationships or the economic *status quo*. They also favor programs that distribute rents "equitably." But again the term "equitable" is broadly defined to include broad-based access to the process of distributing rents as well as broad-based receipt of rents or benefits.

PROGRAMS THAT CONTROL EXTERNALITIES

In programs that fall into this second category, the government (any of the three branches) is called upon to allocate user rights as a means of limiting a production or consumption activity that imposes undue costs either on the user group itself or on the community at large. In the cases of radio frequency allocation and groundwater management, overuse jeopardized the value of the resource for its users.

They turned to the government to equitably limit use among themselves. In the development and air pollution cases, users of open space and clean air also called for restrictions. But the users were now the local public and not the producers of the externality. The public demanded that government limit the excessive use of the air and of open space.

These cases have two important characteristics in common. First, the resource being preserved was a quasi-public or communal good. Before the introduction of regulation, air waves, groundwater, open-space, and air were all communal and not privately held resources. Conceivably, if the government had foreseen a future shortage of the resource, it might have laid claim to it in "the beginning," before any users had made investments and come to enjoy benefits that depended on free access to the communal good. Indeed, it did exactly that in the case of the public lands. Second, in all these cases, users enjoyed the benefits of the communal resource. They had made substantial business investments on the assumption that the resources in question would be freely available to them.

These two attributes suggest something of a contradiction. A public or communal resource is at stake, yet the semblance of private ownership obtains. As the government steps in to limit use, should it simply allocate complete property rights to a small subgroup of the users while stripping the rest of their limited communal rights? Or should it take the resource from its present users and redistribute it? Or should it first take away and then sell back the resource to its present user?

Although the contradiction may exist in the abstract and, in fact, pervades the stated objectives and design of at least one of our cases, the judicial, the legislative, and the executive branches have uniformly supported the claims of historic users when allocating rights. In all four cases, rights have been allocated to historic users and the allocations have been based on historic use. In the cases of radio broadcast licenses and groundwater pumping rights, rights were distributed to existing broadcasters and pumpers and on the basis of historic use. Development rights were allocated to landowners on the basis of the development that the zoning of their parcels would permit--

a historic owner on the basis of his historic rights. And finally in the air pollution case, the polluter, after complying with all the mandatory regulatory standards, is, in effect, granted pollution rights for all the remaining pollution he produces--again the historic user of the air on the basis of historic use.

Although in all these cases, the government uniformly allocates rights to historic users, there is ample evidence it does so ambivalently. The allocation of radio broadcast licenses perhaps represents the best example of such a case. Congress declared the air waves to be public property and ordered first the Federal Radio Commission and then the Federal Communications Commission to distribute them on a best use basis to a limited number of broadcasters who would serve the public.

But in spite of their mandate to lay claim to the air waves and "sell" them to prospective users for promises of good broadcasting, the commissions did not. Instead, they canceled the licenses of only a few existing stations and made every effort to reduce broadcast interference by reducing broadcast wattage and by forcing overlapping stations to time-share. In short, the commissions allocated rights to historic users and, to the degree possible, on the basis of historic use. They also did their best to distribute the costs of regulation as evenly as possible across the industry.

It is worth noting that once Congress did appropriate the airwaves, the allocation of new licenses could conform to the best-user model. Thus, as technology permitted radio and later television stations to be added with increasing interference, applicants competed on the basis of providing competition and of serving community needs.

The allocative objective in this type of case is not to capture the developer's rents as it had been in the previous type. Rather, it is to reduce exploitation of the resource and, at the same time, to distribute the costs of that reduction among the users in a way that maintains their existing economic relationships or the economic *status quo*. Thus, no price has ever been exacted for rights allocated in these programs. Recipients are simply given formal title to all or part of what they already informally have. And later when owners are in a position to capture rents based on the new scarcity of the resource, rarely will a

[7] The FCC does attempt to recapture licensee rents through its public interest requirements for public service programming, local programming, etc.

[8] The original work documenting the benefits conferred by regulation on producer groups was, of course, Stigler, "The Theory of Economic Regulation," The Bell Journal of Economics and Management Science, Vol. II, 1971.

[9] In the case of natural gas, lack of a coherent program meant that historic users often had access to all the gas their suppliers had--more than their historic allocation.

[10] Bohi, Douglas R. and Milton Russell, Limiting Oil Imports, An Economic History and Analysis, (Johns Hopkins University Press, 1978).

[11] See particularly Timothy Quinn, A More General Theory of Environmental Policy, With an Application to the Evolution of Groundwater Law in California, Ph.D. Dissertation, UCLA, 1983.

[12] The following discussion draws heavily on Timothy Quinn, A More General Theory of Environmental Policy. This work provides a full theoretical discussion and detailed economic analyses that support the hypotheses presented here.

FOOTNOTES

[1] This research was supported by EPA Contract No. 68-01-6236. Preparation of the paper was supported, in part, by the Institute for Civil Justice, The Rand Corporation. This paper first appeared in the *Journal of Policy Analysis and Management*, Fall, 1983.

[2] Joskow, P.L. and R.G. Noll, "Regulation in Theory and Practice: An Overview," in G. Fromm (ed.), *Studies in Public Regulation*, MIT Press, Cambridge, 1981, p. 36.

[3] This discussion of property rights rests on Alchian, Armen, *Some Economics of Property*, The Rand Corporation, P-2316. In his paper, Alchian defines property rights in terms of the legally permitted uses the owner can make of the object of the right. The value of the right will then vary according to the range of permitted uses inherent in it. See pp. 10-16.

[4] For a more detailed description of the salient case characteristics, see Elizabeth Rolph, *Government Allocation of Property Rights: Why and How*, The Rand Corporation, R-2822-EPA, July 1982.

[5] In this study, we have examined two components of the Federal Communications Commission's program to allocate frequencies for television and radio broadcast. The program was originally mandated by Congress in 1928 to allocate radio frequencies. During the 1920s, the number of broadcasters expanded dramatically and overuse of the airwaves led to increasing interference and poor reception. So, broadcasters themselves asked for government intervention to limit excessive use. Two decades later, broadcasters turned to television. By this time, the airwaves had been "appropriated" or claimed as public property and there were no historic users on the television frequencies. Therefore, the allocation of these channels, although part of the original Commission program, is an example of the first type of program, a program to develop public resources.

[6] Transfer is handled by the private sector. A number of firms have sprung up to coordinate entry into the lottery and to transfer the leases for winners--all for a fee.

It appears that political objectives and constraints may simply preclude the efficient design of regulatory programs that allocate property rights. But herein lies the challenge to the policy analyst. Rather than preaching efficient solutions, mindless of the political requirements constraining the policymaker, or judging the policymaking apparatus as hopelessly ensnared in the web of interest group politics, the analyst might explore and come to understand the political constraints. Then he might be able to innovate new policy options that are both more efficient than those customarily adopted and consistent with the broad political constraints that seem to play a major role in determining program designs.

This research also demonstrates that the analyst should explore the implications of alternative design choices if he is to provide the policymaker with an improved menu of policy alternatives. Our case material suggests that certain allocation decisions lead inexorably to other design requirements. Programs that allocate rights to best users provide a good example. Once that choice is made, it follows that rights cannot be transferred, that recipients' behavior must be constantly reviewed, and that allocation and monitoring procedures will be very complex and costly. In short, the analyst must understand the link between design choice, implementation, and program evolution before he can tell what the adoption of a particular policy will bring.

And finally our research suggests the importance of understanding the implications of program design choices before policies are adopted. Once they are in place, policies prove exceedingly hard to amend or abandon. Once the government makes a commitment to protect a group, that protection constitutes the *status quo*. Once programs are implemented, firms and consumers adjust. Again, those adjusted relationships become the *status quo* and prove very difficult to change. Hence there is little room for experimentation in policymaking.

In sum, this proposed model of regulation suggests that policies can be rooted either in changes in the political balance or in changes in private market conditions. And our group of property allocation cases, while by no means a statistically drawn sample, at least strongly hints at the possibility that a substantial majority of such programs are responses to the latter: private market changes that threaten the distributional *status quo*.

Viewing regulatory programs as attempts to maintain the distributional *status quo* also has significant practical implications for the policy analyst. As we noted at the outset, the persistence with which policymakers continue to support inefficient regulatory programs may indicate they are constrained or guided by objectives many analysts do not fully appreciate. And our exploratory analysis suggests one such objective is to minimize the redistribution of wealth. Thus, we are unlikely to see efficient programs adopted unless they do not affect the distribution of wealth.

Some analysts, while acknowledging political constraints governing the redistribution of wealth, conclude that compensating losers with the winners' gains will permit the adoption of both efficient and politically acceptable programs. They argue that efficient policies result in an aggregate increase in wealth. Therefore, it is possible in cases where an efficient policy would result in the redistribution of wealth to fully compensate the losers with only some of the gains of the winners, leaving everyone at least as well off as before. However, our case studies suggest that seemingly obvious compensation devices may be difficult to adopt and implement. The windfall profits tax on petroleum producers is an example of a case in which the windfall was originally to be returned to many of those paying higher energy prices. But slowly Congress diverted the money to other uses. Furthermore, the fact that our cases demonstrate reluctance on the part of policymakers to accomplish most policy objectives with direct cash transfers or freely salable rights suggests that compensation may have to be quite indirect and hence complex.

analyses posit an absolute difference in the political strength of the winners and the losers, capture theorists do not examine the political characteristics of winning and losing groups nor have they attempted to document relative shifts in power among the groups.

Stepping back for a moment to view the phenomenon of regulation afresh, let us examine regulatory outcomes from a different vantage point. If, instead of assessing gains and losses with reference to that magic base-case, economic standing in the free market today, we assess gains and losses (winners and losers) with reference to the distribution of wealth at the time a policy was adopted, what do we see? This research suggests quite a different outcome. We do not see winners and losers. Instead, we see "non-losers"--participants who have managed, more or less, to hold on to their share of the pie. If there were losses to be borne, they were borne more or less equally. If there were gains, they were shared more or less equally.

Viewing regulatory policymaking from this new vantage point may permit us to develop a more complete explanation of the causes and determinants of regulatory policy. Think, for a moment, of policymaking as taking place in the context of two key "environments." There is the political environment, reflecting interest groups in a particular power configuration or balance. Then there is the economic environment, reflecting a particular distribution of wealth and earning potential. The two would normally be in equilibrium one with the other. One would expect to see, for any given balance of power among the interest groups, a related distribution of wealth. However, if there is a shift, for whatever reason, in the political balance, then one would not be surprised to see--in fact would expect to see--government policies that produce a concomitant shift in the distribution of wealth. As blacks become a significant political force, we are not surprised to see regulations forcing equal opportunity employment and supporting minority businesses. Similarly, if some change in private market conditions threatens to cause a significant redistribution of wealth but the balance of political power has not changed, one might expect government policies that attempt to bolster the distributional *status quo*. Thus, if farm productivity rises dramatically while demand remains stable, one might well expect government to adopt some measures to preserve (not to increase) the earning power of the agricultural producers.

without causing any immediate, major redistribution of wealth. When the government wants to transfer a right, as in the case of offshore leasing, charging for that right maintains the *status quo*. When the right or economic standing is already formally or informally held by a group, as in the cases of radio broadcast frequencies or acreage allotments, programs seem to be designed to respect that ownership to the degree possible and work to preserve existing economic relationships. As the programs protecting consumers demonstrate, exceptions may be required to distribute essential goods and services to non-historic users (e.g., allocating gasoline for ambulances), but by and large, historic rights dominate in program design, and even more so in implementation. Similarly, programs allocate rights to preserve the competitive relationships within an industry, although this end is achieved with a different design. These results hold both theoretical and practical implications for the analyst.

They suggest a fundamental departure from the widely held view that regulatory policies generally--and the allocation of property rights, by inference--are products of politically successful efforts to redistribute wealth.[12] Theoreticians of this view focus on the long-term distributive consequences of regulatory policies. Their analyses are based on comparisons of different groups' wealth today under regulation and estimates of what those same groups would have enjoyed today under free market conditions, the differences being what the groups gained or lost under the particular regulatory scheme. The winners are those who are better off today under regulation than they would be today in a free market situation. The losers are those who are worse off. Winners are then described as the most politically powerful group, with their redistributive gains owing to their strength.

Always viewing regulatory policy as the result of the winners grabbing something from the losers, however, presents us with a serious problem. How do we explain the adoption of these policies at a particular point in time? If the winner is strongest, why did he not grab an increased share of the pie some time ago? To explain the adoption of such policies, it would seem that we must also suppose a shift in the political balance of power. Otherwise what explains the adoption of the policy then--not sooner and not later? And while their

rights be set aside for distribution to "good uses," including agriculture and alternative energy sources.

Several cases support our observation that if there is a continuing relationship between the regulator and the recipient, a program will grow more complex. Perhaps the oil cases provide the most outstanding examples. Programs that are more or less self administering, as in the case of truck operating authorities, offer little excuse or opportunity for increasing their scope or detail. Programs that are incompletely formulated when they are put into effect and programs that require continual reallocation invite additional regulation intended to correct for the unexpected.

Although it may be commonplace to expand the scope of a program, effecting significant change is not. Our case studies suggest that once program provisions have been adopted, players adapt rapidly to the new environment and soon have vested interests in its perpetuation. Once some have secured advantageous positions in the new context, they will oppose change. That new context becomes the *status quo*.

OBSERVATIONS AND CONCLUSIONS

Our sample of programs that confer property rights strongly suggests that there are considerations that constrain policymakers in their choice of alternative program design options. Even across our diverse set of cases, clear allocative and implementation patterns emerge. The existence of these patterns indicates, as others working in this area are coming to realize, that programs have been tailored to satisfy strong, underlying political requirements.[11] Our case studies also demonstrate that certain program design choices seem inevitably to beget certain consequences--certain secondary design choices, implementation decisions, and evolutionary characteristics. And once made, design choices seem extremely difficult to alter. Analysts, therefore, clearly need to understand and weigh the consequences of alternative program designs.

Of greatest interest is the fact that the design patterns across programs have a common theme--the maintenance of the economic *status quo*. Both the choice of recipients and the basis for making allocations used in the programs clearly reflect an effort to deal with a problem

stop cash exchanges in the oil quota program, so, in fact, exchanges in both programs rested heavily on cash sales.

CHARACTERISTICS NOT RELATED TO TYPE OF PROGRAM

A number of program characteristics do not appear to be directly linked to program type. Rather, they seem to reflect more general political biases, evolutionary patterns applicable to all types of cases, or characteristics that flow from program design features.

Many programs reflect a clear political concern for the "small business." The two oil entitlements programs subsidized small refiners by giving them greater access to the cheaper crude. Congress and organizers of lease auctions have made conscious efforts to adopt bid formulas that do not discriminate against the small developers. And it is likely that one objective in linking the transferability of acreage allotments to the sale of the land was to prevent the large farmers from buying up allotments and driving the smaller producer out.

Several evolutionary trends emerge from an examination of cases in this study. A number of cases demonstrate a tendency to use programs that confer rights to subsidize other, often totally unrelated, "good causes." Moreover, if there is a continuing relationship between the regulator and recipient, the program will also tend to grow increasingly complex over time. And finally, in all programs, regulators seem to find it extremely difficult to change the rules--even those uniformly acknowledged to be bad.

Programs that confer something of value inevitably tempt policymakers to satisfy multiple policy objectives. The rights from one program make a fine subsidy in another. Programs conferring rights on actual users are particularly opportune targets, because the recipient group is constantly undergoing change anyway, and slowly over the years new "good causes" or uses can be added to the list of recipients. In perhaps the most outstanding instance in our group of cases--the price-controlled oil entitlements program--administrators authorized entitlements to be issued to a number of other recipients, in addition to the refiners. Over the years, the oil quota program rules were also revised to favor many other policy objectives. Similarly, California's Air Resources Board proposed that some share of the banked pollution

economic niche. Under the voluntary oil quota program, the Department of Interior initially granted rights to purchase the cheaper foreign oil to importers. But entering the import business is relatively easy and cheap, and new entrants flocked to capture the valuable rights to the cheaper oil. To prevent this kind of skimming, the Department of Interior redesigned the program to make refiners the recipients of the rights--refining being a business that requires a major commitment of resources, suggesting a long-term business commitment.

Again, because no resource shortage existed and because the entitlement programs were not intended to protect any particular constituency with the industry, rights were allocated on the basis of actual use. As a user's consumption varied, so did his allotment. And to insure that allocation quotas did respond to changing consumption levels, rights were short-term and quotas were recalculated frequently. Under such a program, new or growing businesses depending on the more expensive supply would not operate under a serious handicap and shrinking businesses would not enjoy a great windfall when disposing of excess rights.

The entitlement programs appear to differ from most programs we have examined, because they allocate rights to actual users on the basis of actual use, not to historic users on the basis of historic use. This difference is deceptive. In the particular context entitlement programs operate, the allocation of rights to actual users stabilizes competitive relationships within the industry (the economic *status quo*) just as price ceilings and floors stabilize economic relationships between producers and consumers in programs establishing price ceilings and floors. The programs are identical in that they all support economic relationships in place when they are adopted.

Political considerations appear to dictate whether or not rights are salable in this type of program. According to one account of the oil quota program, rights could not be sold but oil could be exchanged, because cash payments would have made the program's cost to the consumer (equal to the value or the price of rights to buy cheaper foreign crude) extremely visible.[10] On the other hand, the oil entitlements program, part of a program subsidizing the consumer at the expense of the producer, permitted the sale of entitlements. It proved impossible to

that legislation proposed to earmark much of the tax proceeds for energy research and subsidies, thereby compensating the consumer for his increasing energy bill. Little by little Congress whittled away these restrictions, and finally passed the bill with only some provisions to assist low income households.

It seems likely that these alternatives to price control are not as politically attractive, because the consumer still encounters the higher price tag. It is immediate and tangible. The future complications and costs a price control program might incur are not.

Intra-Industry Protection

As noted above, there are also times when either government intervention or changing market conditions affect members of an industry unevenly. In this type of case, government intervention will reflect an effort to prevent dislocation within the industry and hold its members to the given competitive *status quo*. The entitlements of the oil quota program and the oil price control program represent two examples of such programs. The first protected domestic producers. The second, adopted as the first was phased out, protected consumers. In both cases, new government regulations suddenly created multiple prices for crude oil, and users had uneven access to the cheaper supply. Those enjoying better access stood to gain a competitive advantage when they then sold their products.

Two key characteristics of these cases resulted in rights being allocated not to historic users but to actual users. First, there was not an overall shortage of the good. Only the cheaper version was scarce. Second, as we noted above, preserving the *status quo* in these cases only meant equalizing the burden of dislocation among members of the group. There was room for new entrants and no reason to exclude them. Therefore, new entrants as well as historic users were eligible recipients of rights.

However, if new entrants are eligible to receive rights for the limited resource, the program must be designed to insure that the new entrants are in a business sense, *bona fide* new entrants--not entrepreneurs simply eager to cream off the value attached to the rights being conferred, but long-term industrial participants filling an

Allocation rules are invariably more complex in consumer protection cases than in producer protection cases. Programs protecting producers fix the price of a commodity, but they do not create a shortage for consumers willing to pay that price. Therefore, if something is "badly needed," it can be obtained. Ambulances can get gas, owners just pay more. However, in the case of a price ceiling, there is a shortage. Because regulations hold the price below the market clearing level, the good or service "sells out." There is no more gas to fuel the ambulance. Therefore, to accommodate special needs as well as changing social and economic conditions, we should expect programs that impose price ceilings to have complex, discretionary allocation rules, with the government holding oversight and intervention authority.

In fact, the two consumer protection cases in our sample meet that expectation. The petroleum allocation program incorporated a complex overlay of legislatively mandated allocation priorities and bureaucratic authority. Although more informal, the Federal Power Commission's natural gas allocation program rested on the same model. In both cases, historic users were entitled to at least their historic allocations.[9] In the case of oil, surplus product could be allocated at the discretion of the controlling government agency or by private market mechanisms. But in the event the supplies fell below the quantity allocated to historic users, both programs mandated that existing supplies be allocated to "best users" according to complex need formulas. In neither case were allocation rights legally transferable.

Although Congress has been reluctant to use them, there are alternative mechanisms that prevent producers from capturing windfall gains. An example might be some form of windfall or excess profits tax, where the proceeds are returned to the consumers of the good in question. Such devices have been and are being used. They are usually called upon, however, only after some form of price control has been found wanting. And often policymakers choose not to return the tax proceeds to the consumer of the good. Instead the monies go to the general fund, still leaving the consumer with the seemingly unreasonable price. The Windfall Profits Tax Act of 1980, levying a tax on the excess profits of oil producers, offers a good case in point. Initially

Since programs granting production subsidies must limit access to the subsidy, they limit new entry. The Motor Carrier Act of 1935 authorized the Interstate Commerce Commission to issue additional operating authorities to new truckers if their applications met a "public convenience and necessity" test. In practice, the Commission issued few additional operating authorities. Similarly, the acreage allotment program did not entitle any new producers to allotments.

In both cases, the group of eligibles could not be expanded and new entrants had to buy access to the price floor from existing right-holders. Operating authorities were freely salable and regularly sold in the private market. Acreage allotments could not be separated from the land to which they attached. That is, no producer could keep his land but sell the right to plant his allotted acreage to his neighbor. To acquire the allotment, the neighbor had to buy or rent the land. Landowners often made such transfers, capitalizing the value of the allotment into the sale or lease price.

The producers' right to the price floor appeared to be valid for the duration of the program. There are no examples of programs issuing short-term rights of access. Such a design would be more cumbersome administratively. It would also repeatedly raise the issue of eligibility. If only last year's producers are eligible, why withdraw and reissue permits? If others are eligible, who should they be?

Consumer Protection Programs

Programs benefiting consumers often take the form of "price ceilings" placed on some good or service. Because the ceilings generally hold prices below the market clearing point, demand for the product inevitably outstrips the supply at that price. Thus, some means other than price must be used to allocate the price controlled good or service. The oil price control program went hand in hand with a program to allocate crude and refined products. And, as price controls on natural gas inevitably led to shortages, the Federal Power Commission had to establish allocation priorities.

Producer Protection Programs

Programs designed to forestall producer losses often take the form of a "price floor" for some good or service. Since a "price floor" is, in effect, a subsidy and would attract new producers just when there was a serious surplus of a commodity or service, some mechanism to limit eligibility must accompany such programs. The truck operating authorities program limited entry into the trucking business when the Interstate Commerce Commission set rates above the market level. Similarly, the acreage allotment program allowed the government to limit its obligation to pay support prices to farmers for specified crops by limiting the acres farmers could plant.

If eligibility is to be limited, access or rights to the subsidy must be allocated. In these programs allocations again appear to be made to historic producers. The Interstate Commerce Commission granted operating authorities (licenses to haul on specified routes) to the truckers and to the firms in business when the legislation was passed. Similarly, the Department of Agriculture ruled that only those farmers producing the supported crops during a specified base period preceding the start of the program should receive the acreage allotments that, in turn, entitled them to price supports.

The fact the political process shows a preference for historic producers in this type of case should not be surprising. The group being protected, after all, had sufficient political muscle to get the subsidy in the first place. It should also be strong enough to see that its gains are not imperilled by a flood of new entrants.[8]

Programs benefiting producers not only allocate rights to historic producers, but they appear to do so entirely on the basis of the producer's historic production share. Eligible truckers received permits authorizing them to continue serving their historic routes and customers. Since the purpose of acreage allotments was to reduce the total production of subsidized crops, the Department of Agriculture fixed the total acreage it would allow farmers to plant for each crop. Then each eligible farmer received allotments entitling him to plant his historic acreage share of the newly fixed total acreage. That is, he was given the same share of the new total that he had of the base period total.

program attempt to divert those rents to the government or force them to be passed on to the consumer.[7]

Because the ceiling on the production of the externality is intended to be permanent, all programs allow the transfer of rights to accommodate new entry into the industry. The very purpose of both the development rights program and the air pollution rights program, with its banking and transfer component, is to provide a mechanism for aggregating rights. So, for the most part, both these programs allow the freest form of transferability, sale. Groundwater rights are also generally salable in some fashion.

Only in the case of radio frequency rights is there an apparent effort to hinder transfer of the right. Since Congress has ordered the Federal Communications Commission to allocate all broadcast rights to best users, the Commission's rules provide that all new licensees must be screened. Thus in principle, the buyer of a station should be evaluated as any new entrant would be. But as we noted above, the Commission very rarely tries to strip a new radio broadcaster of a license that came with his station. Radio licenses are readily passed with the station from new owner to new owner.

In programs adopted to limit externalities, regulatory bodies have allocated rights that are valid in perpetuity. Although there has been some discussion in California of making air pollution rights good only for a "long term," policymakers have not found an acceptable way to limit an owner's term of ownership, and currently rights are held in perpetuity. Similarly, although radio broadcast licenses expire after a limited term, they are virtually always renewed.

PROGRAMS TO MODERATE CHANGING MARKET CONDITIONS

Programs falling under this final category have been adopted by Congress or the executive branch to forestall losses threatening particular groups when market conditions change. Rights are conferred as a means of preserving an economic *status quo*. They benefit potential losers.

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